

#### Landslide Symbols

- ROCK SLIDE:** Slope movement with bedrock as its primary source material. This class of failure includes rotational and translational landslides; relatively cohesive slide masses with failure planes that are deep-seated in comparison to those debris slides of similar areal extent. The slide plane is curved in a rotational slide. Movement along a planar joint or bedding surface may be referred to as translational. Complex variations with combinations of rotational heads and translational movement or earthflows downslope are common. Landslide boundary indicates confidence; solid line - definite, dashed line - probable, dotted line - questionable. " " indicates a scarp, arrows show direction of movement.
- EARTHFLOW:** Slow to rapid movement of mostly fine-grained soil with some rocky debris in a semi-viscous, highly plastic state. After initial failure, the mass may flow or creep seasonally in response to changes in groundwater level. These types of slope failures often include complexes of nested rotational slides and deeply incised gullies. Landslide boundary indicates confidence; solid line - definite, dashed line - probable, dotted line - questionable. " " indicates a scarp, arrows show direction of movement.
- DEBRIS SLIDE:** Mass of unconsolidated rock, colluvium, and coarse-grained soil that has moved slowly to rapidly downslope along a relatively steep, shallow, translational failure plane. Debris slides form steep, unvegetated scars in the head region and possibly irregular, hummocky deposits in the toe region. Scars commonly erode and remain unvegetated for several seasons depending on slope aspect. Landslide boundary indicates confidence; solid line - definite, dashed line - probable, dotted line - questionable. Landslide deposit is locally absent. " " indicates a scarp, no arrows are used to portray landslide movement direction.
- DEBRIS FLOW:** Long stretches of bare ground that have been scoured and eroded to bedrock by extremely rapid movement of water-laden debris. Debris flows are commonly triggered by debris sliding in the source area during high intensity rains. Debris is often deposited downslope as a tangled mass of organic material in a matrix of rock, and soil; debris may be reworked and incorporated into subsequent events; lack of vegetation indicates recent activity. Landslide boundary indicates confidence; solid line - definite, dashed line - probable, dotted line - questionable. Landslide deposit is locally absent. " " indicates a scarp, arrow shows direction of movement.
- DEBRIS SLIDE SLOPE:** A geomorphic feature characterized by steep, usually well-vegetated slopes that appear to have been sculpted by numerous debris slides and debris flows. Upper reaches (source areas) of these slopes are often tightly concave and very steep. Soil and colluvium atop bedrock may be disrupted by active debris slides and debris flows. Slopes near the angle of repose may be relative stable except where weak bedding planes, bedrock joints and fractures parallel the slope.

#### Landslide Activity

- ACTIVE or HISTORIC:** The landslide appears to be currently moving or movements have been recorded in the past. Fresh cracks, disrupted vegetation or displaced or damaged cultural features indicate recent activity. Water may pond in depressions created by rotation of the slide mass or blockage of stream drainage.
- DORMANT-YOUNG:** The landforms related to the landslide are relatively fresh, but there is no record of historic movement. Cracks in the slide mass are generally absent or greatly eroded; scarps may be prominent but are slightly rounded. Depressions or ponds may be partly filled in with sediment, but still show xeromorphic vegetation.
- DORMANT-MATURE:** The landforms related to the landslide have been smoothed by erosion and re-vegetated. The main scarp is rounded, the toe area has been eroded and some new drainages established within the slide area. Benches and hummocky topography on the slopes are subdued and commonly obscured by dense, relatively uniform vegetation.
- DORMANT-OLD:** The landforms related to the landslide have been greatly eroded, including significant gullies or canyons cut into the landslide mass by small streams. Original headscarp, benches and hummocky topography are now mostly rounded and subtle. Closed depressions or ponds now breached or filled in. Vegetation has recovered and mostly matches the vegetation outside the slide boundaries.

#### Line Symbols

- State highway and Post Mile
- County road
- Study boundary

## LANDSLIDE MAP OF THE HIGHWAY 299 CORRIDOR HUMBOLDT COUNTY, CALIFORNIA BLUE LAKE TO WILLOW CREEK (PM 6.6 - PM 40.0) PLATE 2, SHEET 1 OF 2 (WESTERN PORTION)

James N. Falls, CEG and Burt C. Hardin, CEG  
2005

